ಕರ್ನಾಟಕ ವಿಧಾನ ಪರಿಷತ್ತು

1. ಚುಕ್ಕೆ ಗುರುತಿಲ್ಲದ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ : (403) 386
2. ಸದಸ್ಯರ ಹೆಸರು : ಶ್ರೀ ಎಂ.ಪಿ ಸುನೀಲ್ ಸುಬ್ರಮಣಿ
3. ಉತ್ತರಿಸುವ ದಿನಾಂಕ: : 04-02-2021
4. ಉತ್ತರಿಸುವವರು : ಮುಖ್ಯಮಂತ್ರಿಯವರು

ಕ್ರಸಂ	ಪ್ರಶ್ನೆ	ಉತ್ತರ
ಅ)	ಕೋವಿಡ್-19 ಸೋಂಕು ತೀವ್ರಗೊಂಡಿದ್ದ ಸಂದರ್ಭದಲ್ಲಿ ಇಲಾಖೆಯಿಂದ ಅಥವಾ ಬಿ.ಬಿ.ಎಂ.ಪಿ.ಯಿಂದ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗಳಿಗೆ ಶಿಫಾರಸ್ಸುಗೊಂಡಿದ್ದ ರೋಗಿಗಳ ಆರೈಕೆಗೆ ಸರ್ಕಾರ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗಳಿಗೆ ನೀಡಿದ ಹಣವೆಷ್ಟು; ಆಸ್ಪತ್ರೆಗಳವಾರು ಹಣ, ರೋಗಿಗಳ ಸಂಖ್ಯೆ ನೀಡಲಾದ ವೈದ್ಯೋಪಚಾರದ ವಿವರಗಳೊಂದಿಗೆ ಸಂಪೂರ್ಣ ವಿವರ ನೀಡುವುದು;	**ಸುವರ್ಣ ಆರೋಗ್ಯ ಸುರಕ್ಷಾ ಟ್ರಸ್ಟ್ ಇವರ ಉತ್ತರ :-** ಸುವರ್ಣ ಆರೋಗ್ಯ ಸುರಕ್ಷಾ ಟ್ರಸ್ಟ್ ಅಡಿಯಲ್ಲಿ ದಿನಾಂಕ: 23-06-2020ರ HFW 228 ACS 2020 ಅಧಿಸೂಚನೆ ಹೊರಡಿಸಿದ ನಂತರ, ಕೋವಿಡ್ ಸೋಂಕು ತೀವ್ರಗೊಂಡಿದ್ದ ಸಂದರ್ಭದಲ್ಲಿ ನೋಂದಾಯಿತ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗಳಿಗೆ ಶಿಫಾರಸ್ಸುಗೊಂಡಿದ್ದ ರೋಗಿಗಳ ಆರೈಕೆಗೆ, ಆಯುಷ್ಮಾನ್ ಭಾರತ್-ಆರೋಗ್ಯ ಕರ್ನಾಟಕ ಯೋಜನೆ ಯಡಿ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗಳಿಗೆ ರೂ.18,893.17ಲಕ್ಷಗಳ ಹಣವನ್ನು ಪಾವತಿಸಲಾಗಿದೆ. ಅಲ್ಪ ಪ್ರಮಾಣದ ರೋಗ ಲಕ್ಷಣವಿರುವ 51604 ಕೋವಿಡ್ ರೋಗಿಗಳಿಗೆ ರಾಜ್ಯ ಸರ್ಕಾರದಿಂದ ಹೊರಡಿಸಿರುವ ಚಿಕಿತ್ಸಾ ಮಾರ್ಗದರ್ಶನದಂತೆ, ಚಿಕಿತ್ಸೆಗಳಿಗೆ ಪೂರ್ವಾನುಮತಿ(ಪ್ರೀಆಥ್) ನೀಡಿದೆ ಹಾಗೂ ತೀವ್ರತರವಾದ ರೋಗ ಲಕ್ಷಣವಿರುವ 4962 ಕೋವಿಡ್ ರೋಗಿಗಳಿಗೆ ರಾಜ್ಯ ಸರ್ಕಾರದಿಂದ ಹೊರಡಿಸಿರುವ ಚಿಕಿತ್ಸಾ ಮಾರ್ಗದರ್ಶನದಂತೆ ಚಿಕಿತ್ಸೆಗಳಿಗೆ ಪೂರ್ವಾನುಮತಿ ನೀಡಿದೆ. ಆಸ್ಪತ್ರೆವಾರು ಹಣ, ರೋಗಿಗಳ ಸಂಖ್ಯೆ, ನೀಡಲಾದ ವಿವರವನ್ನು **ಅನುಬಂಧ-1** ರಲ್ಲಿ ಹಾಗೂ ವೈದ್ಯೋಪಚಾರದ ವಿವರಗಳನ್ನು **ಅನುಬಂಧ-2**ರಲ್ಲಿ ನೀಡಿದೆ.
ಆ)	ಕೋವಿಡ್-19 ಸೋಂಕು ತೀವ್ರಗೊಂಡಿದ್ದ ಸಂದರ್ಭದಲ್ಲಿ ಇಲಾಖೆಯಿಂದ ಅಥವಾ ಬಿ.ಬಿ.ಎಂ.ಪಿ.ಯಿಂದ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗೆ ಶಿಫಾರಸ್ಸು ಮಾಡಿದ ಸಂದರ್ಭದಲ್ಲಿ ಕಾನೂನು ಬಾಹಿರವಾಗಿ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗಳು ರೋಗಿಗಳಿಂದ ಹಣ ಪಡೆದ ಪ್ರಕರಣಗಳು ಸರ್ಕಾರದ ಗಮನಕ್ಕೆ ಬಂದಿದೆಯೇ; (ಪ್ರಕರಣವಾರು ವಿವರ ನೀಡುವುದು)	ಬಂದಿದೆ. ಕೋವಿಡ್-19 ಸೋಂಕು ತೀವ್ರಗೊಂಡಿದ್ದ ಸಂದರ್ಭದಲ್ಲಿ ಇಲಾಖೆಯಿಂದ ಅಥವಾ ಬಿ.ಬಿ.ಎಂ.ಪಿ.ಯಿಂದ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗೆ ಶಿಫಾರಸ್ಸು ಮಾಡಿದ ಸಂದರ್ಭದಲ್ಲಿ ಕಾನೂನು ಬಾಹಿರವಾಗಿ ಖಾಸಗಿ ಆಸ್ಪತ್ರೆಗಳು ರೋಗಿಗಳಿಂದ ಹಣ ಪಡೆದ ಪ್ರಕರಣಗಳ ವಿವರಗಳನ್ನು **ಅನುಬಂಧ-3**ರಲ್ಲಿ ನೀಡಿದೆ.
ಇ)	ಈ ರೀತಿಯಲ್ಲಿ ಸರ್ಕಾರದಿಂದ ಹಣ ಪಡೆದ ಜೊತೆಗೆ ರೋಗಿಗಳಿಂದಲೂ ಹಣ ಪಡೆದ ಆಸ್ಪತ್ರೆಗಳ ವಿರುದ್ಧ ಕ್ರಮ ಕೈಗೊಳ್ಳಲಾಗಿದೆಯೇ; (ವಿವರ ನೀಡುವುದು) ಇಲ್ಲವಾದಲ್ಲಿ, ಇವರ ವಿರುದ್ಧ ಕಠಿಣ ಕ್ರಮ ಕೈಗೊಳ್ಳಲು ಇರುವ ತೊಡಕುಗಳೇನು? (ಸಂಪೂರ್ಣ ವಿವರ ಒದಗಿಸುವುದು)	ಈ ರೀತಿಯಲ್ಲಿ ಸರ್ಕಾರದಿಂದ ಹಣ ಪಡೆದ ಜೊತೆಗೆ ರೋಗಿಗಳಿಂದಲೂ ಹಣ ಪಡೆದ ಆಸ್ಪತ್ರೆಗಳಿಂದ ರೋಗಿಗಳಿಗೆ ಹಣವನ್ನು ಹಿಂತಿರುಗಿಸಲಾಗಿರುತ್ತದೆ.

ಸಂಖ್ಯೆ : ನಅಇ 22 ಬಿಬಿಎಲ್ 2021

(ಬಿ.ಎಸ್.ಯಡಿಯೂರಪ್ಪ)
ಮುಖ್ಯಮಂತ್ರಿ.

COVID 19_Under AB ArK Scheme_Bangalore-Rural & Bangalore Urban District Private Hospital wise Summary as on 31st January 2021

Sl No.	Hospital Name	Hospital District	Preauth Approved							Claims Paid	
			71 No.	72 No.	Total (71 & 72)	73 No.	74 No.	Total (73 & 74)	Grand Total	Cases	Amount (in lakhs)
1	BGS GLOBAL HOSPITAL	BENGALURU	470	-	470	10	71	81	551	482	211.26
2	Sagar Hospitals	BENGALURU	748	229	977	36	23	59	1,036	912	344.23
3	VYDEHI HOSPITAL	BENGALURU	1,213	334	1,547	87	54	141	1,688	1,357	615.70
4	SAPTHAGIRI SUPER SPECIALITY HOSPITAL	BENGALURU	1,369	95	1,464	42	47	89	1,553	1,315	497.51
5	TRINITY HOSPITAL AND HEART FOUNDATION	BENGALURU	1	24	25	-	-	-	25	17	5.16
6	M S Ramaiah Hospital	BENGALURU	1,939	293	2,232	115	105	220	2,452	2,391	1,101.33
7	Suguna Hospital Bangalore	BENGALURU	313	5	318	41	9	50	368	323	115.26
8	Bhagwan Mahaveer Jain Hospital	BENGALURU	62	544	606	4	6	10	616	601	289.75
9	RAJARAJESWARI MEDICALCOLLEGE AND HOSPITAL	BENGALURU	3,836	140	3,976	89	72	161	4,137	1,867	732.64
10	NU Hospitals Pvt Ltd	BENGALURU	-	32	32	-	-	-	32	7	2.87
11	HBS HOSPITAL TRUST	BENGALURU	3	93	96	21	45	66	162	104	67.12
12	Yashomati Hospitals	BENGALURU	103	-	103	108	7	115	218	209	97.95
13	SPECIALIST HEALTH SYSTEM PVT LIMITED	BENGALURU	19	32	51	20	9	29	80	55	17.79
14	SANJEEVINI HOSPITAL Bangalore North	BENGALURU	6	8	14	14	15	29	43	31	12.58
15	ASTER CMI HOSPITAL	BENGALURU	813	41	854	10	30	40	894	886	454.61
16	EAST POINT HOSPITAL	BENGALURU	2,235	191	2,426	71	25	96	2,522	2,178	904.87
17	KIMS HOSPITAL AND RESEARCH CENTER	BENGALURU	938	372	1,310	226	40	266	1,576	1,016	462.72
18	Fortis Hospital Bannerghatta	BENGALURU	-	334	334	27	17	44	378	326	176.78
19	FORTIS HOSPITAL Cunningham Road	BENGALURU	142	6	148	25	31	56	204	144	42.25
20	Apollo Hospitals, A Unit of Imperial Hospital	BENGALURU	482	111	593	4	66	70	663	594	236.16
21	RAINBOW CHILDRENS MEDICARE PRIVATE LIMITED	BENGALURU	3	66	69	2	5	7	76	45	9.43
22	ST JOHNS MEDICAL COLLEGE HOSPITAL	BENGALURU	493	1,519	2,012	-	114	114	2,126	1,903	945.11
23	SPARSH HOSPITAL	BENGALURU	12	1,422	1,434	3	53	56	1,490	1,318	451.05
24	ST THERESAS HOSPITAL	BENGALURU	676	-	676	-	-	-	676	635	288.53
25	BGS GLOBALINSTITUTE OFMEDICALSCIENCES AND HOSPITAL	BENGALURU	1,275	187	1,462	45	13	58	1,520	1,127	499.29
26	SANTOSH HOSPITAL	BENGALURU	1	109	110	16	1	17	127	122	75.14
27	SHIFAA HOSPITAL	BENGALURU	3	12	15	152	31	183	198	92	34.98
28	Apollo Hospitals Enterprise Limited	BENGALURU	34	445	479	30	37	67	546	326	109.79
29	PRASHANTH HOSPITAL	BENGALURU	387	128	515	11	17	28	543	463	219.18
30	PM SANTOSHA HOSPITAL	BENGALURU	94	16	110	1	1	2	112	109	49.30
31	Aveksha Hospital	BENGALURU	30	17	47	9	3	12	59	20	8.79
32	Nagappa Hadli Hospital	BENGALURU	337	69	406	12	-	12	418	417	153.61
33	NEW JANAPRIYA SUPER SPECIALITY HOSPITAL	BENGALURU	7	24	31	5	3	8	39	6	2.39
34	Mallige Medical Centre Pvt Ltd	BENGALURU	105	64	169	17	17	34	203	131	58.61
35	ST PHILOMENAS HOSPITAL	BENGALURU	243	481	724	10	46	56	780	696	280.38
36	DR B R AMBEDKAR MEDICAL COLLEGE AND HOSPITAL	BENGALURU	398	81	479	13	20	33	512	307	141.76
37	Bhagwan Mahaveer Jain Hospital - Girinagar	BENGALURU	144	267	411	19	14	33	444	400	192.72
38	Manipal Northside Hospital a unit of MHEPL	BENGALURU	50	733	783	16	109	125	908	793	322.07
39	ST MARTHAS HOSPITAL	BENGALURU	466	416	882	43	18	61	943	874	365.08
40	Manipal Hospitals Bangalore	BENGALURU	116	422	538	8	63	71	609	464	195.46
41	PEOPLE TREE HOSPITALS	BENGALURU	311	124	435	24	9	33	468	381	133.11
42	CHINMAYA MISSION HOSPITAL	BENGALURU	616	-	616	89	29	118	734	655	327.43
43	Aster RV Hospital	BENGALURU	288	-	288	20	18	38	326	302	144.86
44	BANGALORE BAPTIST HOSPITAL	BENGALURU	921	75	996	59	49	108	1,104	1,054	473.89
45	TRUSTWELL HOSPITALS PRIVATE LIMITED	BENGALURU	51	51	102	10	6	16	118	16	6.04
46	FORTIS HOSPITALS	BENGALURU	57	22	79	1	1	2	81	62	23.20
47	Rangadore Memorial Hospital	BENGALURU	52	129	181	14	12	26	207	163	78.58
48	Sakra Hospital	BENGALURU	2	436	438	68	491	559	997	804	289.20
49	Aaxis Hospital	BENGALURU	39	-	39	9	2	11	50	42	15.19
50	Columbia Asia Hospital-Whitefield	BENGALURU	199	134	333	3	8	11	344	251	87.91
51	Atreum Hospitals Pvt Ltd	BENGALURU	39	17	56	13	2	15	71	62	28.02
52	Agadi Hospital and research centre	BENGALURU	245	15	260	-	-	-	260	254	66.01
53	Vimalalaya Hospital a Unit of Vimalalaya Hospital	BENGALURU	485	119	604	4	5	9	613	387	135.05
54	Comfort Multi Speciality Hospital	BENGALURU	19	16	35	7	14	21	56	52	26.38
55	Vasavi Hospital	BENGALURU	12	1	13	1	2	3	16	3	1.19
56	The Pulse Multispeciality Hospital	BENGALURU	2	15	17	-	3	3	20	-	-
57	Sreenivasa hospital	BENGALURU	-	5	5	3	5	8	13	-	-
58	M/S SHEKHAR HOSPITAL	BENGALURU	59	1	60		3	3	63	41	10.81
59	Sathya Sai Orthopadic and Multispeciality Hospital	BENGALURU	219	18	237	1	-	1	238	236	112.26
60	MEDSTAR SPECIALITY HOSPITAL	BENGALURU	21	6	27	1	-	1	28	18	7.87
61	Athreya Hospital	BENGALURU	270	31	301	-	-	-	301	290	114.32
62	Columbia Asia Referral Hospital Yeshwanthpur	BENGALURU	739	7	746	12	53	65	811	693	294.93
63	Columbia Asia Hospital Hebbal	BENGALURU	118	55	173	1	23	24	197	141	51.52
64	Sri Sai Hospital Nagwara	BENGALURU	5	19	24	11	11	22	46	34	22.75
65	PAN Nagarbhavi Hospitals Pvt Ltd	BENGALURU	15	12	27	-	1	1	28	14	3.98
66	Punya Hospitals India pvt Ltd	BENGALURU	46	62	108	4	9	13	121	-	-
67	Pristine Hospital And Research Centre Pvt. Ltd	BENGALURU	63	65	128	18	10	28	156	124	56.95
68	Columbia Asia Hospital	BENGALURU	84	159	243	27	19	46	289	177	72.13
69	Prakriya Hospitals A Unit of C Square Healthcare	BENGALURU	115	29	144	45	15	60	204	92	36.61
70	GUNASHEELA SURGICAL AND MATERNITY HOSPITAL	BENGALURU	23	-	23	-	-	-	23	22	9.49
71	CURA	BENGALURU	36	72	108	6	5	11	119	113	43.89
72	Sri Ashwini Hospital	BENGALURU	38	25	63	6	6	12	75	54	27.60
73	Vikram Hospital Bengaluru Private Limited	BENGALURU	237	129	366	67	24	91	457	376	122.20
74	Apoorva Hospitals And Diagnostic Centre	BENGALURU	248	-	248	37	-	37	285	234	108.80
75	Rajshekar Multi Speciality Hospital Pvt Ltd	BENGALURU	57	13	70	-	-	-	70	66	24.61
76	Artyem Hospital	BENGALURU	39	7	46	31	7	38	84	34	13.08
77	Sevakshetra Hospital	BENGALURU	26	5	31	12	-	12	43	30	14.60
78	Maya Multispeciality Hospital	BENGALURU	2	-	2	-	-	-	2	1	0.36
79	Excelcare Hospital Excelcare Health Alliance LLP	BENGALURU	-	43	43	9	1	10	53	41	16.23
80	Ananya Hospital Pvt. Ltd, Rajajinagar	BENGALURU	143	51	194	-	-	-	194	190	72.12
81	Citi Hospital	BENGALURU	88	-	88	2	-	2	90	83	25.56
82	Gayathri Hospitals Pvt Limited	BENGALURU	2	-	2	-	1	1	3	2	1.08
83	Sree sai prasad multispeciality Hospital	BENGALURU	30	-	30	6	4	10	40	24	8.85
84	Sri Sai Hospitals	BENGALURU	54	8	62	-	-	-	62	37	13.77
85	Lenus Hospitals	BENGALURU	1	1	2	-	-	-	2	-	-
86	Sri Lakshmi Multi Speciality Hospital	BENGALURU	131	54	185	-	21	21	206	143	65.00
87	Sri Sai Ram Hospital	BENGALURU	17	-	17	3	-	3	20	15	4.53
88	Saralaya Hospitals pvt Ltd	BENGALURU	9	-	9	-	-	-	9	8	2.38
89	Nano hospital	BENGALURU	4	49	53	25	1	26	79	35	12.12
90	Navachethana Hospital A Unit of Pan Asia Hospitals	BENGALURU	17	123	140	-	17	17	157	116	51.45
91	Kanva Sri sai Hospital	BENGALURU	11	5	16	7	10	17	33	-	-
92	fortis hospital Rajajinagar	BENGALURU	39	43	82	-	-	-	82	24	7.32

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			71 No.	72 No.	Total (71 & 72)	73 No.	74 No.	Total (73 & 74)	Grand Total	Cases	Amount (in lakhs)
93	ASTRA SUPER SPECIALITY HOSPITAL	BENGALURU	165	19	184	11	13	24	208	205	95.63
94	Manipal Hospitals Whitefield	BENGALURU	59	40	99	7	7	14	113	92	43.91
95	Dr Malathi Manipal Hospital	BENGALURU	17	67	84	3	1	4	88	85	29.15
96	APOLLO HOSPITALS ENTERPRISES LIMITED -SHESHADRIPUR	BENGALURU	-	240	240	28	9	37	277	119	45.72
97	Vagus Super Speciality Hospital	BENGALURU	6	95	101	12	35	47	148	73	34.81
98	V-CARE MEDISCON HOSPITAL	BENGALURU	39	45	84	33	1	34	118	87	64.70
99	Mediscope Chest and Super Speciality Hospital	BENGALURU	4	24	28	7	18	25	53	47	37.73
100	GANGA SPECIALTY HOSPITAL	BENGALURU	285	273	558	-	-	-	558	553	317.75
101	The Bangalore Hospital	BENGALURU	9	136	145	-	5	5	150	25	7.20
102	BANGALORE INSTITUTE OF GASTROENTEROLOGY	BENGALURU	11	34	45	8	3	11	56	-	-
103	Swasa hospital	BENGALURU	80	78	108	7	-	7	115	97	35.72
104	manipal the prevention centre	BENGALURU	52	-	52	-	-	-	52	44	13.57
105	Pulse Hospital	BENGALURU	31	9	40	1	-	1	41	31	16.38
106	P D HINDUJA SINDHI HOSPITAL	BENGALURU	65	19	84	7	-	7	91	75	28.91
107	REPUBLIC HOSPITAL	BENGALURU	7	16	23	-	-	-	23	22	8.16
108	Dr GVG HEALTHCARE PVT LTD	BENGALURU	8	15	23	-	20	20	43	8	5.97
109	Shankar super speciality hospital	BENGALURU	6	3	9	14	10	24	33	5	2.01
110	Narayana Hrudayalaya Private Limited	BENGALURU RURAL	1,560	1	1,561	81	31	112	1,673	1,518	590.20
111	N R R Hospital	BENGALURU RURAL	52	31	83	9	5	14	97	26	12.51
112	AKASH HOSPITAL	BENGALURU RURAL	4,585	915	5,500	32	163	195	5,695	3,705	1,795.56
113	MVJ MEDICAL COLLEGE AND RESEARCH HOSPITAL	BENGALURU RURAL	53	1,488	1,541	108	50	158	1,699	1,282	690.54
114	LEENA MULTISPECIALITY HOSPITAL	BENGALURU RURAL	13	-	13	-	-	-	13	1	0.34
115	MANASA HOSPITAL	BENGALURU RURAL	18	9	27	2	-	2	29	12	3.57
116	The Oxford Medical College Hospital & Research cen	BENGALURU RURAL	2,696	23	2,719	29	15	44	2,763	1,988	743.12
117	RAMAIAH HARSHA HOSPITAL	BENGALURU RURAL	80	1	81	-	-	-	81	73	28.07
118	Nandi Multi Specialty Hospital	BENGALURU RURAL	2	-	2	1	-	1	3	3	0.74
119	SRI SIDDHARTHA INSTITUTE OF MEDICAL SCIENCES	BENGALURU RURAL	624	-	624	-	-	-	624	533	173.54
120	ACE- Suhas Hospital	BENGALURU RURAL	9	-	9	3	20	23	32	24	8.21
121	Mar Thoma Mission Hospital	BENGALURU RURAL	8	-	8	-	-	-	8	3	1.13
122	Columbia Asia Hospital Doddaballapura	BENGALURU RURAL	2	4	6	1	-	1	7	4	1.88
Total			36,527	15,220	51,604	2,495	2,614	4,962	56,566	43,799	18,893.17

Note: Approved & Wait for Payer Approval cases payment in pipeline [illegible]

6 302015-2

TREATMENT PROTOCOL FOR COVID19 PATIENTS (VERSION 3.0)

DISCLAIMER: This Recommendation is derived from the prevailing trials published and collation of various guidelines. These guidelines would change with the evolving evidences

DEFINITIONS:

- ILI is defined as one with acute respiratory infection
  - with fever ≥ 38^0 C (100.4^{0}F) and
  - cough
  - with onset within last 10 days
- SARI is defined as one with acute respiratory infection
  - with fever ≥ 38^0 C (100.4^{0}F),
  - cough
  - with onset within the last 10 days and
  - requiring hospitalization
- Respiratory failure
  - Represents the failure of the lung to maintain adequate gas exchange
  - Characterized by ABG abnormalities: PaO2< 60 mmHg with or without hypercarbia PaCO2> 46 mmHg (with drop in pH<7.30)

COVID 19 RT-PCR POSITIVE PATIENT

1. Management of any COVID 19 patient mandates the Health Care Personnel (HCP) to be in full Personal Protection Equipment(PPE).

2. Patient is Categorized in to three groups:

CATEGORY	Type of patients who are provided treatment and care
Group A	Asymptomatic/Patients with mild symptoms **RR<24/m & SpO2>94% in room air**
Group B	Symptomatic patient with mild to moderate Pneumonia with no signs of severe disease **RR: 24-30/m (or) SPO2: 90%-94% at Room Air**
Group C	Symptomatic patient with Severe Pneumonia with **RR > 30/min (or) SPO2 < 90% at Room Air (or) less than 94% with oxygen, ARDS, Septic Shock**

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CLINICAL CATEGORIES

Clinical category	Description	Parameters
Asymptomatic	No Symptoms	SpO2: ≥94% in room air RR: ≤ 24/m No evidence of hypoxemia or breathlessness
Mild	Patients with uncomplicated upper respiratory tract infection.	SpO2: ≥94% in room air RR: ≤ 24/m No evidence of hypoxemia or breathlessness
Moderate	Pneumonia with no signs of severe disease	Sp02: 94%-90% in room air RR: 24-30/m
Severe	Severe Pneumonia	SpO2: < 90% room air RR: >30/m
Critical	**Acute Respiratory Distress Syndrome (ARDS)**	**Onset: new or worsening respiratory symptoms within one week of known clinical insult. Chest imaging (Chest X ray and portable bed side lung ultrasound): bilateral opacities, not fully explained by effusions, lobar or lung collapse, or nodules. Origin of Pulmonary infiltrates: respiratory failure not fully explained by cardiac failure or fluid overload. Need objective assessment (e.g. echocardiography) to exclude hydrostatic cause of infiltrates/ oedema if no risk factor present. Oxygenation impairment in adults: Mild ARDS: 200 mmHg < PaO2/FiO2 ≤ 300 mmHg (with PEEP or CPAP ≥5 cm H2O) Moderate ARDS: 100 mmHg < PaO2/FiO2 ≤200 mmHg with PEEP ≥5 cm H2O) Severe ARDS: PaO2/FiO2 ≤ 100 mmHg with PEEP ≥5 cm H2O) When PaO2 is not available, SpO2/FiO2 ≤315 suggests ARDS (including in non- ventilated patients)**
Critical	Septic Shock	**Adults: persisting hypotension despite volume resuscitation, requiring vasopressors to maintain MAP ≥65 mmHg and serum lactate level > 2 mmol/L**

INVESTIGATIONS

Timing	Mild	Moderate	Severe/Critical
At admission	CBC RBS ECG HbA1C (if Diabetic) D-Dimer **(If starting on Tab Favipiravir)** RFT S.Electrolyte S. Uric Acid	• Complete Blood Count (with N/L RATIO) • LFT, RFT, RBS • S.Electrolytes • 12 lead ECG • CHEST X Ray –PA view • CRP, D-DIMER • S. FERRITIN, S.LDH • PROCALCITONIN • TROP – I & T • PT/INR • ABG • CT Thorax (if Available) • **Blood culture (if total count is high)** • **IL – 6** • **S. Cortisol** • **2D ECHOCARDIOGRAPHY** • **COVID Antibody IgM/IgGTests**	•Complete Blood Count (with N/L RATIO) •LFT, RFT, RBS •S. Electrolytes •12 lead ECG •CHEST X Ray –PA view •CRP, D-DIMER •S. FERRITIN, S.LDH •PROCALCITONIN •TROP – I & T •PT/INR •ABG •CT Thorax (if Available) •**Blood culture (if total count is high)** •**IL – 6** •**S. Cortisol** •**S.Mg^{2+}, S.Ca^{2+}** •**2D ECHOCARDIOGRAPHY** •**NTproBNP** •**HsCRP** •**S. Lactate** •**COVID Antibody IgM/IgGTests**
Repeat Daily	–	Complete Blood Count, LFT, RFT ABG	Complete Blood Count, LFT, RFT ABG
Repeat Every 72hrs	**If initial D-Dimer is high**	CRP, D-DIMER S. FERRITIN, S.LDH Chest X ray	CRP, D-DIMER S. FERRITIN, S.LDH Chest X ray
At the time of discharge	–	CRP, D-DIMER S. FERRITIN, S.LDH Chest X ray	CRP, D-DIMER S. FERRITIN, S.LDH Chest X ray RT-PCR – Nasal & Throat swab

Other Investigations should be done based on patient's Co-morbid status

IDENTIFICATION OF HIGH-RISK PATIENT

CO MORBIDITIES	CLINICALLY	LABORATORY VALUE
Age>50 yrs	Hypoxia- SPO2<94%	**Lymphopenia (<20) with Neutrophil/Lymphocyte ratio >17**
Ischecmic Heart Disease	Tachycardia>100/min	CRP>100 mg/L
Diabetes	Respiratory Distress RR>30/min	Serum Ferritin >300 microg/L
Hypertension	Hypotension Systolic BP < 90mmHg	**LDH >450**
Lung Disease (COPD/Asthma/Post TB Sequele)	Altered Sensorium	D-Dimer > 1000ng/ml
Chronic Kidney Disease/ Chronic Liver Disease		
Immunosuppression / HIV / Malignancy		
Obesity		

Note: Calculation tool for predicting critically ill COVID-19 at admission can be used as reference tool. (Development of Validation of Clinical risk score to predict the occurrence of critical illness in hospitalised patient with COVID19. JAMA internal Medicine –published online, May 12/05/2020)

GENERAL MEASURES AND GUIDELINES

1) **Categorize in to A, B, C based on Symptoms, SpO2 & Respiratory Rate**

2) **Supportive Care:**

- **Finger Pulse Oximeter for continuous monitoring of Heart rate and Oxygen saturation**
- **Start oxygen with Mask at saturation of 94% or lower**
- **HFNC to be used if there is failed oxygen therapy and Non-invasive ventilation (NIV) to be used appropriately with two limb circuit expiratory filters**
- **Counselling of COVID19 patients (By Counsellor/psychologist/psychiatrist)**
- Normal feeding, no dietary restrictions, good oral hydration
- Maintenance IV fluids (If indicated)
- Maintain blood glucose levels <180 mg/dl.
- If Patient is on ACE inhibitors/ARBs, should be continued.
- Avoid using NSAIDs other than Paracetamol Unless Absolutely Necessary
- Avoid using Nebulized drugs to avoid aerosolization of virus. **PREFER MDI with SPACER**
- Antibiotic selection in case of superadded bacterial pneumonia should be according to institution antibiogram.

GROUP A - MILD CASES	
TREATMENT	**PRECAUTIONS**
ANTIVIRAL THERAPY • TAB HYDROXYCHLOROQUININE(HCQ) 400MG BD FOR 1 DAY Followed by 200MG 1-0-1 X 4 DAY **for patients in COVID CARE CENTER/HOME ISOLATION** **(OR)** **Tab FAVIPIRAVIR 1800mg 1-0-1 on Day 1 f/b 800mg 1-0-1 for 6 days (total 7 days) for PATIENTS IN DCHC** **(OR)** **If Tab HCQ/Tab FAVIPIRAVIR is contraindicated, then combination of Cap DOXYCYCLIN 100mg 1-0-1 for 5 days** **+** **Tab IVERMECTIN 12mg 1-0-0 for 3 days** • #Cap Oseltamavir 75mg 1-0-1 for 5 days **ANTICOAGULATION** • Inj ENOXAPARIN 40mg S/C 1-0-0 X 7 DAYS (IF D-DIMER IS MORE THAN 1000NG/ML (OR) X-RAY/CT THORAX SHOWING GROUND GLASS OPACITIES) **SUPPORTIVE THERAPY-** • TAB ZINC 50 MG 0-1-0 X 7 DAYS • TAB VITAMIN C 500 MG 1-1-1 X 7 DAYS • Tab N Acetylcysteine 600mg 1-1-1 If Patients Having Cough	• CATEGORIZATION SHOULD BE REASSESSED REGULARLY • CONTRAINDICATION FOR HCQ- • QT INTERVAL > 480ms • Pre-existing cardiomyopathy and cardiac rhythm disorders • History of Unexplained Syncope • Retinopathy, • Hypersensitivity to HCQ or 4-aminoquinoline compounds • G6PD deficiency • Epilepsy • Hypokalemia (K^+ < 3 Meq) • **Contraindications for Tab FAVIPIRAVIR: Hyperuricaemia, severe hepatic & renal impairment, Pregnant women and lactating mothers** • PREGNANCY IS NOT A CONTRAINDICATION FOR HCQ • # Cap OSELTAMAVIR is advised due to possibility of H1N1 co infection along with COVID19 disease with present weather condition. Its usage will be reviewed at a later date.

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GROUP B - MODERATE CASES	
TREATMENT	PRECAUTIONS
ANTIVIRAL THERAPY • **Inj REMDESIVIR** 200 mg IV on day 1 followed by 100 mg IV daily for 4 days (total 5 days) **IF REMEDESVIR IS NOT AVAILABLE** TO START TAB HYDROXYCHLOROQUININE(HCQ) 400MG BD FOR 1 DAY followed by 200MG 1-0-1 X 4 DAY **Co-administration of Inj REMDESIVIR with HCQ or chloroquine should be avoided** ◦ **Cap Oseltamavir 75mg 1-0-1 for 5 days** **STEROIDS** • Inj. Methyl Prednisolone 0.5 -1 mg/kg (or) Inj. Dexamethasone 0.1 – 0.2 mg/kg for 3-5 Days **ANTICOAGULATION** • Inj ENOXAPARIN 40MG S/C 1-0-0 x 7 DAYS IV ANTIBIOTICS ACCORDING TO LOCAL ANTIBIOGRAM AWAKE PRONING • **CONVALASCENT PLASMA THERAPY**: 4 to 13 ml/kg (usually 200 ml single dose given slowly over not less than 2 hours) **SUPPORTIVE THERAPY** • TAB ZINC 50 MG 0-1-0 X 7 DAYS • TAB VITAMIN C 500 MG 1-1-1 X 7 DAYS • TAB N-ACETYL CYSTEINE 1-1-1 IN PATIENTS WITH COUGH	**Contraindications for Inj REMDESIVIR:** • **AST/ALT > 5 times Upper limit of normal (ULN)** • **Severe renal impairment (i.e., eGFR < 30ml/min/m2 or need for hemodialysis)** • **Pregnancy or lactating females** • **Children (< 12 years of age)** • **No dose adjustment for Inj REMDESIVIR if eGFR >30ml/min** • **Formula to calculate eGFR in Adults** • **eGFR, Male: (140 – age in years) × (weight in kg) / 72 × (serum creatinine in mg/dL);** • **eGFR, Female: (140 – age in years) × (weight in kg) × 0.85 / 72 × (serum creatinine in mg/dL)** **STEROIDS** • to be started preferably within 48 hours of admission (or) if oxygen requirement is increasing and if inflammatory markers are increased. • PATIENT SHOULD BE REASSESSED EVERY 12 HRLY AND CONTINOUS MONITORING OF SATURATION. • START ON OXYGEN-NASAL PRONGS 2-5 L/MIN or FACE MASK 5L/MIN

GROUP C - SEVERE/CRITICAL CASES	
TREATMENT	**PRECAUTIONS**
ANTIVIRAL THERAPY • **If the patient has not received Inj REMDESIVIR, such patients can be started on Inj REMDESIVIR.** **Inj REMDESIVIR** 200 mg IV on day 1 followed by 100 mg IV daily for 4 days (total 5 days) • **Inj. TOCILUZUMAB 8mg/kg (maximum 800 mg at one time) given slowly in 100 ml NS over 1 hour; dose can be repeated once after 12 to 24 hours if needed** **(Or)** **Inj ITOLIZUMAB: 1st dose – 1.6mg/kg dose iv infusion. Subsequent dose: weekly 0.8mg/kg dose infusion over 4hours if required** • **Cap Oseltamavir 75mg 1-0-1 for 5 days** **STEROIDS** • Inj. Methyl Prednisolone. 1-2 mg/kg. **(or)** Inj. Dexamethasone 0.2 – 0.4 mg /kg for 5-7 Days **ANTICOAGULATION** • Inj ENOXAPARIN 1mg/kg body wt s/c 1-0-1 X 7 DAYS PRONE VENTILLATION Inj CEFTRIAXONE 1gm IV 1-0-1 AND CAN BE ESCALATED ACCORDING TO LOCAL ANTIBIOGRAM OR TREATING PHYSICIAN **CONSIDER SEPSIVAC** (IF AVAILABLE) 0.3ml INTRADERMAL ONCE A DAY FOR 3 DAYS IN CASE OF SEPTIC SHOCK **IV Diuretics in case of evidence of Heart Failure secondary to Myocarditis** **SUPPORTIVE THERAPY** • TAB ZINC 50 MG 0-1-0X 7 DAYS • INJ. VITAMIN C 1.5GM IV 6 HOURLY X 5DAYS • TAB N-ACETYL CYSTEINE 1-1-1	**Indication for TOCILUZUMAB/ITOLIZUMAB:-** 1. IL-6 levels 50-100 fold higher than normal (Normal range 0 - 9.5pg/ml 2. Worsening trend of the inflammatory markers (Ferritin, LDH, CRP) 3. Deteriorating clinical condition with worsening of PaO2/Fio2 ratio (more than 25% deterioration from the immediate previous value). **Contraindications for Inj TOCILIZUMAB/ITOLIZUMAB** PLHIV, those with active infections (systemic bacterial/fungal), High Serum. Procalcitonin, Tuberculosis, active hepatitis, Absolute Neutrophil Count < 2000/mm3 and Platelet count < 1,00,000/mm3, hepatic and renal impairment; patients on chronic steroid therapy, Paediatric patients <18 years old; Pregnancy and, Nursing mothers • PATIENT SHOULD BE CONTINOUSLY MONITORED • **TO START ON OXYGEN WITH FACE MASK WITH NON REBREATHING BAG @ 8-10 lt/m** • BASED ON PaO2/FiO2 ratio, **HIGH FLOW NASAL OXYGEN (HFNC)/NIV** SHOULD BE GIVEN AND IF PATIENT DETERIORATES INTUBATION SHOULD BE CONSIDERED AND LUNG PROTECTIVE VENTILATION TO BE FOLLOWED AS PER ARDSnet PROTOCOL • ABG TO BE DONE REGULARLY FOR MONITORING OF ACIDOSIS AND HYPOXEMIA • INOTROPHIC SUPPORT (NORADRENALINE – TITRATE ACCORDING TO THE MEAN ARTERIAL PRESSURE) • CORRECTION OF ACIDOSIS • MAINTAIN Hb% GREATER THAN 8gm%

SUMMARY OF TREATMENT OF COVID-19 PATIENTS BASED on CLINICAL CATEGORIES

MILD

Antiviral Therapy*

Tab Hydroxychloroquinine(HCQ) 400mg Bd For 1 Day F/B 200mg 1-0-1 X 4 Day for patients in COVID CARE CENTER/HOME ISOLATION

(OR)

Tab FAVIPIRAVIR 1800mg 1-0-1 on Day 1 f/b 800mg 1-0-1 for 6 days for PATIENTS IN DCHC

(OR)

If Tab HCQ/Tab FAVIPIRAVIR is contraindicated, then combination of

Cap DOXYCYCLIN 100mg 1-0-1 for 5 days

+

Tab IVERMECTIN 12mg 1-0-0 for 3 days

Anticoagulation

Inj Enoxaparin 40mg S/C 1-0-0 x 7 days (If D-dimer Is More Than 1000ng/Ml or X-ray/CT Thorax Showing Ground glass opacity)

Supportive Therapy

Tab Zinc 50 Mg 0-1-0x 7 Days

Tab Vitamin C 500 Mg 1-1-1 X 7 Days

Tab N Acetylcysteine 1-1-1 If Patients Having Cough

MODERATE

Antiviral Therapy*

Inj REMDESVIR 200 mg IV on day 1 followed by 100 mg IV daily for 4 days

(Or)

IF REMEDESVIR IS NOT AVAILABLE TO START

Tab Hydroxychloroquinine(HCQ) 400mg BD For 1 Day F/B 200mg 1-0-1 X 4 Day

Co-administration of Inj REMDESVIR with HCQ or chloroquine should be avoided

STEROIDS

Inj. Methyl Prednisolone 0.5-1 mg/kg (or) Inj. Dexamethasone 0.1 – 0.2 mg /kg for 3-5 Days

ANTICOAGULATION

Inj Enoxaparin 40mg S/C 1-0-0 x 7 days (If Wt >65kg, 60md 1-0-1 for 7days)

Iv Antibiotics According to Local Antibiogram

Awake Proning

Start on oxygen –Nasal Prongs 2-5l/min or face mask 5l/min

CONVALASCENT PLASMA THERAPY: 4 to 13 ml/kg (usually 200 ml single dose given slowly over not less than 2 hours

Supportive Therapy

Tab Zinc 50 Mg 0-1-0x 7 Days

Tab Vitamin C 500 Mg 1-1-1 X 7 Days

Tab N Acetylcysteine 1-1-1 If Patients Having Cough

SEVERE/CRITICAL

Antiviral Therapy*

Inj. TOCILUZUMAB 8mg/kg (maximum 800 mg at one time) given slowly in 100 ml NS over 1 hour; dose can be repeated once after 12 to 24 hours if needed

(Or)

Inj ITOLIZUMAB: 1st dose – 1.6mg/kg dose iv infusion. Subsequent dose: weekly 0.8mg/kg dose infusion over 4hours if required

STEROIDS

Inj. Methyl Prednisolone 1-2 mg/kg for 5-7 Days (or)

Inj. Dexamethasone 0.2 – 0.4 mg /kg for 5-7 Days

ANTICOAGULATION

Inj Enoxaparin 1 Mg/Kg Body Weight S/C 1-0-1 X 7days

Inj Ceftriaxone 1 Gm Iv 1-0-1 And Can Be Escalated According To Local Antibiogram Or Treating Physician

Start on oxygen with face mask+NRM and change over to HFNC/NIV (based on PaO2/FiO2)

IF PATIENT DETERIORATES with HFNC/NIV trial (repeat ABG after 6hrs suggests worsening of oxygenation) then EARLY INTUBATION SHOULD BE CONSIDERED AND LUNG PROTECTIVE VENTILATION TO BE FOLLOWED AS PER ARDSnet PROTOCOL

Prone Ventilation

SEPSIVAC 0.3ml INTRADERMAL ONCE A DAY FOR 3 DAYS

Supportive Therapy

Inj. Vitamin C 1.5gm Iv 6 Hourly X 5 days

Tab Zinc 50 Mg 0-1-0x 7 Days

Tab N Acetylcysteine 1-1-1 If Patients Having Cough

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1. Continous monitoring of oxygen saturation by pulse oximeter and early diagnosis of hypoxemia is essential in all group of patients
2. Indications and contraindications of the drugs are to be considered before use which is mentioned in detail below
3. Transition of patients between the clinical categories is based on SpO2, RR & PaO2/FiO2 ratio
4. Treatment of all co morbid illness to continue

Special Note:

- *Cap Oseltamavir 75mg 1-0-1 for 5 days to be added to patients of all categories
- All the investigational therapies and drugs approved recently by DGCI should be used with caution and after informed consent from the patient

[signature]

1. **Hydroxychloroquine (HCQ)**

Dose: Tab HCQ 400MG BD FOR 1 DAY Followed by 200MG 1-0-1 X 4 Days

CONTRAINDICATION FOR HCQ

- QT INTERVAL > 480ms
- Pre-existing cardiomyopathy and cardiac rhythm disorders
- History of Unexplained Syncope.
- Retinopathy,.
- Hypersensitivity to HCQ or 4-aminoquinoline compounds
- G6PD deficiency
- Epilepsy
- Hypokalemia (K^+ < 3 Meq)

2. **Anticoagulant Agents**

Pro Coagulant factors are increased in COVID-19 infection and associated with increased risk of thrombosis.

Pneumonia and sepsis are complicated by DIC, but although COVID-19 patients do have abnormalities of coagulation and are not atypical of DIC.

The most marked abnormality is an elevation of D-Dimer (if D-dimer is more than 1000ng/ml) but without a parallel fall in platelet or prolongation of clotting time, this suggests that local rather disseminated thrombin generation and fibrinolysis is taking place

Dose:

Inj ENOXAPARIN 40MG S/C Once daily for mild and moderate. Twice daily in severe cases.

Other options:

- Inj Fondaparinux 2.5mg OD SC
- Unfractioned Heparin 5000 Units BD SC

Contraindications:

ESRD, active bleeding, emergency surgery, platelets < 20,000/mm3, BP >200/120 mmHg)

INVESTIGATIONAL THERAPIES (as per MOHFW)

1. **Remdesivir** (under Emergency Use Authorization) may be considered in patients with moderate disease (those on oxygen) with none of the following contraindications:
    - AST/ALT > 5 times Upper limit of normal (ULN)
    - Severe renal impairment (i.e., eGFR < 30ml/min/m2 or need for hemodialysis)
    - Pregnancy or lactating females
    - Children (< 12 years of age)

   Dose: 200 mg IV on day 1 followed by 100 mg IV daily for 4 days (total 5 days)

2. **Convalescent plasma (Off Label)** may be considered in patients with moderate disease who are not improving (oxygen requirement is progressively increasing) despite use of steroids. Special prerequisites while considering convalescent plasma include:
    - ABO compatibility and cross matching of the donor plasma
    - Neutralizing titer of donor plasma should be above the specific threshold (if the latter is not available, plasma IgG titer (against S-protein RBD) above 1:640 should be used)
    - Recipient should be closely monitored for several hours post transfusion for any transfusion related adverse events
    - Use should be avoided in patients with IgA deficiency or immunoglobulin allergy

   Dose: Dose is variable ranging from 4 to 13 ml/kg (usually 200 ml single dose given slowly over not less than 2 hours

3. **Tocilizumab (Off Label)** may be considered in patients with severe disease with progressively increasing oxygen requirements and in mechanically ventilated patients not improving despite use of steroids. Long term safety data in COVID 19 remains largely unknown. Special considerations before its use include:
    - **IL-6 levels 50-100 fold higher than normal (Normal range 0 - 9.5pg/ml**
    - **Worsening trend of the inflammatory markers (Ferritin, LDH, CRP)**
    - **Deteriorating clinical condition with worsening of PaO2/Fio2 ratio (more than 25% deterioration from the immediate previous value)**

   The drug is contraindicated in
   PLHIV, those with active infections (systemic bacterial/fungal), High Serum. Procalcitonin, Tuberculosis, active hepatitis, Absolute Neutrophil Count < 2000/mm3 and Platelet count < 1,00,000/mm3, hepatic and renal impairment; patients on chronic steroid therapy, Paediatric patients <18 years old; Pregnancy and, Nursing mothers

   Dose: 8mg/kg (maximum 800 mg at one time) given slowly in 100 ml NS over 1 hour; dose can be repeated once after 12 to 24 hours if needed

Drugs Recently approved by DGCI

1. **ITOLIZUMAB (An anti-CD6 IgG1 monoclonal antibody)**

   Indication:

   1. IL-6 levels 50-100 fold higher than normal (Normal range 0 - 9.5pg/ml

   2. Worsening trend of the inflammatory markers (Ferritin, LDH, CRP)

   3. Deteriorating clinical condition with worsening of PaO2/Fio2 ratio (more than 25% deterioration from the immediate previous value).

   Dose: 1[st] dose – 1.6mg/kg dose iv infusion

   - Subsequent dose: weekly 0.8mg/kg dose infusion over 4hours if required based on lung function parameters

   <u>Contraindication:</u>

   PLHIV, those with active infections (systemic bacterial/fungal), High Serum. Procalcitonin, Tuberculosis, active hepatitis, Absolute Neutrophil Count < 2000/mm3 and Platelet count < 1,00,000/mm3, hepatic and renal impairment; patients on chronic steroid therapy, Paediatric patients <18 years old; Pregnancy and, Nursing mothers

   <u>Side effects:</u>

   - In trial Infusion reactions have been reported in 15% of the patients
   - In clinical practice also infusion reaction ranged from 12% to 15%
   - Other adverse events include Diahorea, Pruritus in 7 – 12 % of cases

2. **Tab. FAVIPIRAVIR**

   <u>Mechanism of action:</u> It is considered that favipiravir is metabolized in cells to a ribosyl triphosphate form (favipiravir RTP) and that favipiravir RTP selectively inhibits RNA polymerase involved in influenza viral replication

   <u>Indications</u>: mild to moderate cases of COVID19 in adults >18yrs old

   <u>Dose:</u> 1800mg bid followed by 800mg bid upto maximum of 14days

   <u>Contraindications:</u> Hyperuricaemia, severe hepatic & renal impairment, Pregnant women and lactating mothers

   <u>Side Effects:</u> increased Uric Acid levels, diarrhea, decreased neutrophil counts, increase in AST/ALT levels

   <u>Drug Interactions:</u> metabolised partly by Aldehyde Oxidase(AO) and partly by Xanthine Oxidase(XO). Precauitons for co-administration with Pyrazinamide, Repaglinide, Theophyline, Famciclovir

PRONE VENTILATION

Early self-proning in awake, non-intubated patients – Moderate cases

- Any COVID-19 patient with respiratory embarrassment severe enough to be admitted to the hospital may be considered for rotation and early self-proning.
- Care must be taken to not disrupt the flow of oxygen during patient rotation

Criteria to be fulfilled	Avoid proning
• Patients with oxygen requirement of >4L • Normal mental status • Able to self-prone or change position with minimal assistance	• Hemodynamic instability • Close monitoring not possible

- Typical protocols include 30–120 minutes in prone position, followed by 30–120 minutes in left lateral decubitus, right lateral decubitus, and upright sitting position
  (Caputo ND, Strayer RJ, Levitan R. Academic Emergency Medicine 2020;27:375–378)

Requirements for safe prone positioning in ARDS

- Pre-oxygenate the patient with FiO2 1.0
- Secure the endotracheal tube and arterial and central venous catheters
- Adequate number of staff to assist in the turn and to monitor the turn
- Supplies to turn (pads for bed, sheet, protection for the patient)
- Knowledge of how to perform the turn as well as how to supine the patient in case of an emergency

Contraindications to prone ventilation

- Spinal instability requires special care
- Intra cranial pressure may increase on turning
- Rapidly return to supine in case of CPR or defibrillation

When to start proning in SEVERE CASES?

- P/F ratio <150 while being ventilated with FiO2 >0.6 and PEEP >5 cm H2O When to stop proning?
- When P/F exceeds 150 on FiO2 > 0.6 and > 6 PEEP

What portion of the day should patients be kept prone?

- As much as possible (16-18 hours a day).
- Adult patients with severe ARDS receive prone positioning for more than 12 hours per day (strong recommendation, moderate-high confidence in effect estimates).

(ATS-ERS Guideline. Am J RespirCrit Care Med;2017;195(9):1253-1263)

Oxygen delivery protocol

- SpO2 < 94% – Supplement with nasal prongs or simple face mask at 2-5L/min



- Monitor continuous SpO2 with finger pulse oximetry
- If SpO2 < 94% on simple face mask or nasal prongs, change to non-rebreather mask oxygen (NRB) at 10-15L/min



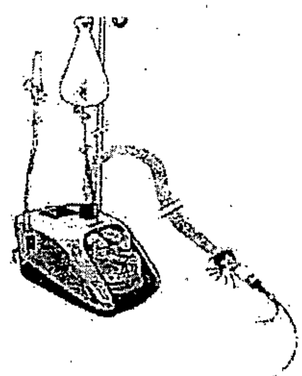
- Oxygen Delivery Devices & approximate FiO2%

100% O_2 Flow Rate (L/min)	FiO_2 (%)
Nasal Cannula	
1	24
2	28
3	32
4	36
5	40
6	44
Oxygen Mask	
5–6	40
6–7	50
7–8	60
Mask with Reservoir Bag	
6	60
7	70
8	80
9	90
10	>99
Nonrebreathing Mask	
4 10	60, 100
Venturi Mask*	
3 (80)	24
6 (68)	28
9 (50)	35
12 (50)	40
15 (41)	50

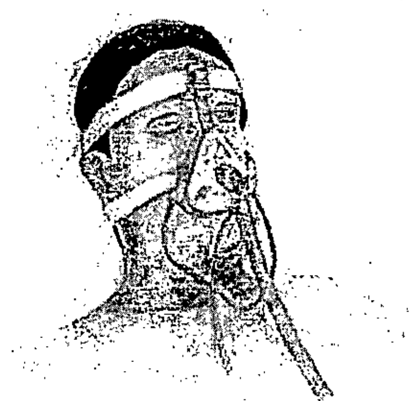
Number in parentheses indicates total flow of entrained room air with Venturi mixture.

HFNO (High Frequency Nasal Oxygen) and NIV (Non-invasive Ventilation)

- When oxygen requirement increases to needing NRB, options of High Frequency Nasal Oxygen (HFNO) or NIV should be considered.
- HFNC flow rates to be set from 30 -60 L/min titrating to maintain SpO2 ≥ 92%.
- HFNC provides PEEP up to 5-6 cm H_2O and can deliver FiO2 up to 100%

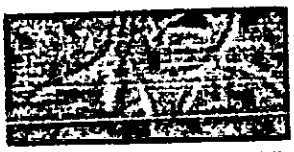


- If HFNC non-available or patient not maintaining SpO2 on flow rates up to 60L/min, initiate on non-invasive ventilation (NIV) only with an ICU ventilator with two limbed circuit and expiratory HME filter with a NIV mode available. Caution is to be exercised to not use potable home BiPAP or CPAP machines with single circuit for these patients.



N I V settings:
FiO2 to be titrated to maintain SpO2 ≥ 92%.
Pressure Support (IPAP): 12-15cm H_2O (to target tidal volume of 6ml/kg)
PEEP (EPAP): 5-15 cmH_2O as tolerated to achieve. SpO2 ≥ 90-92%
Backup rate: 15 breaths/min
Backup I:E ratio 1:3
Trigger: maximum sensitivity

- Appropriate mask with good seal to be ensured when initiated on NIV. Helmet masks/hoods if available, to be preferred to minimize aerosol contamination.
- Once initiated on NIV, close monitoring of respiratory variables hourly is important.
- Reassess clinical condition hourly, monitor and observe ABG's 4-6hrly
- Look for signs of clinical improvement in the form of settling tachycardia, improving SpO2, reduced tachypnea and reduced work of breathing.
- On NIV when there are signs of clinical deterioration in the form of worsening sensorium, increased accessory muscles of breathing, raising Pco2, worsening pH on ABG ~ failure of NIV has to be considered and patient has to be planned for intubation and mechanical ventilation after consent from the family.



watch for accessory muscles of breathing

Intubation and Mechanical Ventilation

- Indication for intubation: ARDS with PaO2/FiO2 < 200
- Worsening respiratory distress even on NIV
- Patient in Shock

Initial Settings: Controlled Mode ventilation: VCV (volume-controlled ventilation) or PCV (pressure-controlled ventilation)

- Tidal Volume (Vt) 6-8ml/PBW (predicted body weight)
- PEEP 8 – 18 cmH_2O (follow FiO2-PEEP table) to titrate to target SpO2 90-92%
- FiO2 ~ target SpO2 90-92% with lowest FiO2 possible
- Respiratory rate 14-18/min (maximum up to 35/min)
- Plateau pressure < 30 cmH_2O and driving pressure < 16cmH_2O
- ABG targets: PaO2 55-80 mmHg, pH > 7.3
- Measure compliance 6hrly ~ Vt in ml /Pplat – PEEP

Notes:

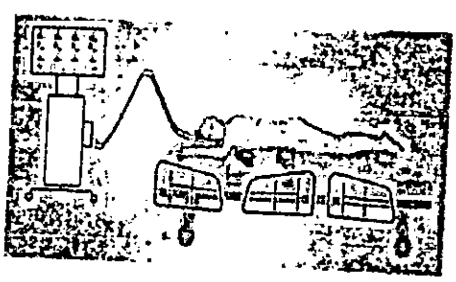
Predicted body weight (PBW)
Males = 50 + 2.3 [height (inches) - 60]
Females = 45.5 + 2.3 [height (inches) -60]

Incremental PEEP FiO2 table

FiO2	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0
PEEP	5	5	8	8	10	10	10	12	14	14	14	16	18	18 - 24

Additional steps: If Pplat > 30cmH_2O, reduce Vt upto 4ml/PBW.

- If SpO2 < 88% despite ARDSnet protocol: increase depth of sedation
- Optimize secretions clearance/bronchodilation
- Initiate early muscle relaxant infusion (cis-atracurium or vecuronium)
- Early prone ventilation



Indication for prone ventilation:

- Intubation and mechanical ventilation < 36hrs
- PaO2/FiO2 < 150, FiO2 > 60%, PEEP > 5, Vt 6ml/PBW
- Duration of proning: 12-16 hrs.
- Multiple sessions until favorable trends are achieved.

Adjunctive measures when intubated and mechanically ventilated:

- **Antibiotics guided by protocols**
- **Steps to reduce VAP (ventilator associated pneumonia) by following VAP bundles**
- **Head-end elevation**
- **Thrombo-prophylaxis**
- **Adequate analgesia and sedation**

In absence of ABG facility at the hospitals, use SpO2/FiO2 ratio as described in the below table

Derivation of SpO_2/FiO_2 values corresponding to PaO_2/FiO_2 ratios in the combined anesthesia and ARMA database*

SOFA Respiratory score	PaO_2/FiO_2	SpO_2/FiO_2
1	<400	<512
2	<300	<357
3	<200	<214
4	<100	<89

*Data derived from 4728 matched SpO_2/FiO_2 and PaO_2/FiO_2 measurements from the combined anesthesia and ARMA database

Derivation of SpO_2/FiO_2 values corresponding to PaO_2/FiO_2 stratified by PEEP in the ARMA database*

SOFA Respiratory score	PaO_2/FiO_2 ratio	SpO_2/FiO_2 ratio		
		PEEP <8	PEEP 8–12	PEEP >12
1	<400	<502	<515	<425
2	<300	<370	<387	<332
3	<200	<240	<259	<234
4	<100	<115	<130	<129

*Data derived from 2916 matched SpO_2/FiO_2 and PaO_2/FiO_2 measurements from the ARMA database of the ARDS network's NIH study(8)

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PRIVATE HOSPITAL REFUND LIST AS ON 08th December 2020 1:30PM										
SL NO	HOSPITAL LIST	DATE OF NOTICE ISSUED	TOTAL PATIENTS TO BE REFUNDED	AMOUNT TO BE REFUNDED	AMOUNT REFUNDED BY HOSPITAL	TOTAL PATIENTS DUE FOR REFUND	REASON FOR REFUNDING LESS NO OF PATIENTS THAN NOTICED	AMOUNT PENDING TO BE REFUNDED BY HOSPITAL	OTHERS
1	A V MULTISPECIALITY HOSPITAL	10/26/2020	5	153033	153033	0	0	0	PAID
2	APOLLO HOSPITAL	10/18/2020	11	310,276	310,276	0	0	0	PAID
3	ASTER R V	10/18/2020	4	315,551	315,551	0	0	0	PAID
4	BHAGWAN MAHAVEER JAIN HOSPITAL	10/18/2020	36	306,154	277,942	1	AWAITING DETAILS OF PT	28,212	IN PROCESS
5	GUNASHEELA HOSPITAL	10/20/2020	2	36,555	36,555	0	0	0	PAID
6	LIFE CARE HOSPITAL	10/20/2020	4	64,970	64,970	0	0	0	PAID
7	MALATHI MANIPAL HOSPITAL	10/22/2020	6	180,201	173,108	0	FOR COMORBID	7093	PAID
8	MARVEL MULTI-SPECIALITY HOSPITAL	10/18/2020	14	249,702	49050	11	INSURANCE CLAIM	200,652	IN PROCESS
9	PULSE MULTISPECIALITY HOSPITAL	10/18/2020	8	221,601	216,000	1	FOR COMORBID	5,601	IN PROCESS
10	RANGADORE MEMORIAL HOSPITAL	10/20/2020	20	463,969	463,969	0	0	0	PAID
11	THE BANGALORE HOSPITAL	10/22/2020	4	91,669	91,669	0	0	0	PAID
12	EXCEL CARE HOSPITAL	10/28/2020	15	844,880	752849	1	AWAITING DETAILS OF PT	92,031	IN PROCESS
13	AGADI HOSPITAL	10/28/2020	4	25,159	13,159	0	PAID LESS DUE TO COMORBID CONDITION AND NON COVID ICU FOR 2 DAYS	12,000	PAID
14	MEENAKSHI HOSPITAL	10/29/2020	9	416,800	416,800	0	0	0	PAID
15	LONDON HOSPITAL	10/29/2020	2	260,708	0	2	HOSPITAL NOT READY TO PAY	260,708	HOSPITAL DENIES TO PAY SAYS CHARGED ONLY AFTER PATINET CONCERN TAKEN
16	KIMS HOSPITAL	11/2/2020	9	57,610	0	9	HOSPITAL NOT READY TO PAY	57,610	HOSPITAL DENIES TO PAY AS CHARGED LESS AND INCLUDES CO MORBID
17	MS SHEKAR HOSPITAL	11/3/2020	9	371,475	263,275	0	FOR COMORBID	5,000	IN PROCESS
18	PINNACLE HOSPITAL	11/2/2020	14	224,507	224,507	0	0	0	PAID
19	ST JHONS HOSPITAL	11/10/2020	46	563,868	0	46	HOSPITAL NOT READY TO PAY	563,868	HOSPITAL NOT RESPONDING
20	BIG HOSPITAL	11/3/2020	13	913,029	913029	0	0	0	PAID
21	RAJ SHEKAR HOSPITAL	11/5/2020	11	267,898	267,898	0	0	0	PAID
22	TRINITY HOSPITAL	11/5/2020	6	346,532	0	6	HOSPITAL NOT READY TO PAY	346,532	HOSPITAL NOT RESPONDING
23	NU HOSPITAL	11/5/2020	2	143,407	143,407	0	0	0	PAID
24	TRUST WELL HOSPITAL	11/6/2020	31	817,576	236610	4	INSURANCE CLAIM and COMORBID	580,964	IN PROCESS
25	DAYANANDA HOSPITAL	11/6/2020	30	2,633,783	2,641,367	0	0	0	PAID
26	VASAVI HOSPITAL	11/13/2020	4	99,480	99,480	0	0	0	PAID
	TOTAL		329	10,233,360	8,129,504	81		2,161,273	

ಮುಖ್ಯ ಆರೋಗ್ಯಾಧಿಕಾರಿ
ಸಾರ್ವಜನಿಕ ಆರೋಗ್ಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ